RECENT RESULTS ON OH CONCENTRATION IN THE STRATOSPHERE,

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The Far Infrared Limb Observing Spectrometer (FILOS) is an instrument designed to measure the hydroxyl radical (OH) and other chemicals in the stratosphere using limb emission in the far infrared region of the spectrum FILOS uses three Fabry-Perot etalons in series to obtain a resolution of 0.002 cm^{-1} near 100 cm^{-1}. It is compact and has low data rate requirements so that it may be flown as an auxiliary balloon payload with larger instruments. FILOS has two 0.05-cm^{-1} bandwidth channels which are currently tuned to OH lines at 101.3 cm^{-1} and 118.2 cm^{-1}. The instrument will be described in further detail and results will be presented for recent balloon flights in 1992 and 1993 which recorded OH as a function of solar angle and altitude. The amount of OH predicted in the high stratosphere from chemical models is 30 % larger than observed.

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Time required: 15 min.

Recommended session: 11 (remote sensing)